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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/526,036

05/04/2005

Juan Jose Romero Vazquez

P/189-373

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11/15/2006

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EXAMINER

NGUYEN, NINH H

ART UNIT

PAPER NUMBER

3745

DATE MAILED: 11/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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<b>Office Action Summary</b>	<b>Application No.</b> 10/526,036	<b>Applicant(s)</b> ROMERO VAZQUEZ, JUAN JOSE	
	<b>Examiner</b> Ninh H. Nguyen	<b>Art Unit</b> 3745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 02/28/05, 06/29/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Specification*

1. The abstract of the disclosure is objected to because it comprises more than one paragraph. Correction is required. See MPEP § 608.01(b).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5, and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Cardoso (1,086,274).

Cardosa discloses a propeller (Figs. 1-3) being configured so as to rotate about an axis of rotation when the propeller is driven by a drive shaft of a craft for the purpose of propelling the craft in a first direction parallel to the axis of rotation and corresponding to the forward motion direction of the craft, and propelling a fluid in a second general direction opposite to the first direction; the propeller comprising a base (Fig. 2); a plurality of blades (Fig. 2) each blade having a surface defined by a first end joined to the base and a second free end separating a leading edge of the blade from a trailing edge of the blade; the blade being oriented to have an angle of attack; the blade having a convex surface suction side (Fig. 2) extending in a third direction from the first end towards the blade tip, the third direction being a direction in which one section of the blade extending in a plane including the axis of rotation and the blade tip; the

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blade having the leading edge upstream from the trailing edge, the leading edge and the trailing edge substantially extending in the direction from the first end to the blade tip; the blade tip being an end point separating the leading edge from the trailing edge; the third direction forming an acute angle  $\alpha$  with the first direction such that  $10^\circ \leq \alpha \leq 80^\circ$  (lines 10-14) in a plane including the axis of rotation; each blade inherently having a length equal to a length of one blade perpendicular to the axis of rotation divided by  $\sin(\alpha)$ ; and inherently having a surface equal to a surface of one blade perpendicular to the axis of rotation divided by  $\sin(\alpha)$ .

wherein  $\alpha = 45^\circ$  (lines 10-14);

wherein the propeller comprises at least three blades (judging from Fig. 2); and

wherein the blades have an elongated configuration in the direction from the first end to the second end (Fig. 2).

4. Claims 1-4, 6, 8, 9, and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Wetherill (350,278).

Wetherill discloses a propeller (Figs. 1-3) being configured so as to rotate about an axis of rotation when the propeller is driven by a drive shaft of a craft for the purpose of propelling the craft in a first direction parallel to the axis of rotation and corresponding to the forward motion direction of the craft, and propelling a fluid in a second general direction opposite to the first direction; the propeller comprising a base A; a plurality of blades B each blade having a surface defined by a first end joined to the base and a second free end separating a leading edge of the blade from a trailing edge of the blade; the blade being oriented to have an angle of attack; the blade having a convex surface suction side (Fig. 1) extending in a third direction from the

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first end towards the blade tip, the third direction being a direction in which one section of the blade extending in a plane including the axis of rotation and the blade tip; the blade having the leading edge upstream from the trailing edge, the leading edge and the trailing edge substantially extending in the direction from the first end to the blade tip; the blade tip being an end point separating the leading edge from the trailing edge; the third direction forming an acute angle  $\alpha$  with the first direction such that  $10^\circ \leq \alpha \leq 80^\circ$  (lines 42-51) in a plane including the axis of rotation; each blade inherently having a length equal to a length of one blade perpendicular to the axis of rotation divided by  $\sin(\alpha)$ ; and inherently having a surface equal to a surface of one blade perpendicular to the axis of rotation divided by  $\sin(\alpha)$ .

wherein  $\alpha = 45^\circ$  (lines 42-51);

wherein the propeller comprises two blades and

wherein the blades have an elongated configuration in the direction from the first end to the second end (Fig. 2).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wetherill in view of Holtermann (4,304,558).

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Wetherill discloses all the limitations except the propulsion system does not comprise a nozzle concentrically located around the axis of rotation of the propeller and laterally enveloping the propeller as claimed.

Holtermann teaches a propulsion device (Figs. 1-4) comprising a propeller having a hub 24, a plurality of blades 22 connected to the hub, a nozzle 30 surrounding the blades for the purpose of augmenting the propeller thrust (abstract).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the propulsion system of Wetherill with the nozzle of Holtermann enveloping the propeller for the purpose of augmenting the propeller thrust as taught by Holtermann.

7. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wetherill in view of Presser (2,298,021).

Wetherill discloses all the limitations except the propulsion system does not comprise at least one retention brace on the suction side of the blade as claimed.

Presser teaches a propulsion system comprising a hub 17, a plurality of angled blade 12 attached to the hub, and at least two retention braces 13 each attached to a surface of the blade to prevent bending of the blades due to centrifugal force and wind resistance (right column, lines 4-6).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the propulsion system of Wetherill with at least two retention

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braces each attached to the suction side of each blade for the purpose of prevent bending of the blades due to centrifugal force and wind resistance taught by Presser.

Regarding claim 14, it would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the propulsion system of Wetherill with each retention brace having the shape of a blade in feather for the purpose of reducing drag force on the propulsion system.

Regarding claim 15, it would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make and install the propulsion system of Wetherill in a turbofan engine for the purpose of improving the turbofan engine performance (lines 47-59).

#### ***Prior Art***

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 2 patents.

Daniel (5,413,464) and Nojiri et al. (4,514,146) are cited to show a propeller having forwarding slanted blades and retention bracing.

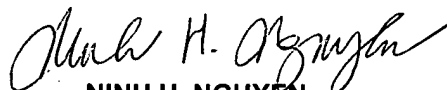
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).

  
**NINH H. NGUYEN**  
**PRIMARY EXAMINER**

Nhn  
November 9, 2006